

east-northeast, gaining strength during the 8th and 9th. The position of the center on the 10th was about 400 miles south of Newfoundland, and several steamers to westward of midocean reported gales; the greatest force, however, was only a strong gale (9). On the 11th and 12th the storm's course was more northerly, so it ceased to affect the chief steamship lanes.

Another low, central on the 16th near the southern tip of Greenland, gradually expanded to southward and eastward till it covered a large area; and for several days, especially the 19th to 21st, showed considerable strength. Numerous reports of gales encountered have been received from vessels then traversing the chief routes to northern Europe, between the 50th and 20th meridians. The American steamship *Scanpenn* reported the greatest force connected with this storm, namely 11. On the 22d and following days this storm withdrew to northeastward.

Tropical storms.—One West Indian hurricane passed through its whole life history during August 1935. Full discussion of the storm appears elsewhere in this issue, but reference is here made to the synoptic weather charts representing two stages of this storm's history. Chart IX, for August 18, illustrates the conditions existing over the Atlantic as the disturbance was emerging from the region of origin, advancing northwestward. On the night of the 18th the American motorship *California Standard* experienced whole gales, backing from northeast to southeast, near 23° N., 64° W., but the lowest barometer was only 29.55 inches.

On the morning of the 21st, as the storm was recurving northward, the American steamship *Angelina* recorded

hurricane winds and a reading of 28.20 inches. Three days later the British freighter *York City* suffered considerable damage near the center, then about 36°30' N., 59°30' W. Chart X shows the situation on the 24th, when the center was near the *York City*, and gives also the approximate track of the center over its whole course.

During the 24th the storm turned northward near the 55th meridian, attended by heavy gales which caused much damage to fishing fleets and considerable loss of life over the Grand Banks and on the Newfoundland and Labrador coasts.

At the end of the month another tropical storm had appeared near the southeastern islands of the Bahama group. A full account of this will appear in the September Review.

Fog.—Near the American coast from New Jersey to Nova Scotia and thence eastward between the fortieth and forty-fifth parallels there was much less fog than during July just preceding, no one 5° square in this strip showing more than 13 days. East of the forty-fifth meridian no fog whatever has been reported in this strip, although fog was more frequent than usual just to westward, over the southern Grand Banks region.

Between the forty-fifth and fiftieth parallels, from eastern Newfoundland to the twentieth meridian, fog was everywhere much more prevalent than usual during August, although it generally was not quite so common as it had been during July 1935. The greatest number of occurrences during August, 18 days, was noted not far east of Newfoundland, in the square 45° to 50° N., 45° to 50° W.

OCEAN GALES AND STORMS, AUGUST 1935

Vessel	Voyage		Position at time of lowest barometer		Gale began August—	Time of lowest barometer August—	Gale ended August—	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH ATLANTIC OCEAN													
Tanamo, Am. S. S.----	Alvaro Obregon.	Philadelphia.	21 48 N.	90 23 W.	2	5p, 2.-----	2	Inches 29.99	SE.-----	SE, 8.-----	SE.-----	SE, 8.-----	
Boston City, Br. S. S.----	Swansea.-----	Montreal.	52 45 N.	50 24 W.	4	9a, 4.-----	4	29.12	WSW.-----	WNW, 8.-----	WNW.-----	WNW, 8.-----	WSW-WNW.
Cardonia, Am. S. S.----	Galveston.-----	Barcelona.	38 38 N.	63 46 W.	9	Noon, 9.-----	9	29.48	N.E.-----	NE, 9.-----	NNE.-----	NE, 9.-----	NE-NW.
Quistconck, Am. S. S.----	New Orleans.-----	Havre.	40 30 N.	58 42 W.	9	2a, 10.-----	11	29.30	SSE.-----	SW, 8.-----	WSW.-----	WSW, 9.-----	SSE-SW.
Bremen, Ger. S. S.----	Cherbourg.-----	New York.	43 25 N.	51 54 W.	10	9p, 10.-----	11	29.66	SSE.-----	SSE, 5.-----	WSW.-----	S, 9.-----	SSE-SW.
Makala, Belg. S. S.----	Banana.-----	Antwerp.	43 58 N.	8 40 W.	12	6p, 12.-----	13	29.76	N.-----	NW, 5.-----	N.-----	N, 8.-----	SW-NNW.
Northern Prince, Br. M. S.----	Trinidad.-----	New York.	21 43 N.	65 00 W.	18	4p, 18.-----	19	29.75	N.-----	NNE, 6.-----	ENE.-----	ENE, 9.-----	N-NE-ENE.
California Standard, Am. M. S.----	Cristobal.-----	London.-----	22 20 N.	64 00 W.	18	9p, 18.-----	19	29.55	N.E.-----	NE, 11.-----	SE.-----	NE, 11.-----	NE-ENE-SE.
General Greene, U. S. C. G.----	Out from St. Johns.		58 37 N.	46 27 W.	20	9a, 20.-----	20	29.35	ESE.-----	SSE, 5.-----	ENE.-----	ENE, 9.-----	SSE-ESE.
Blankholm, Swed. M. S.----	Gothenburg.-----	New York.-----	53 08 N.	38 30 W.	21	3a, 21.-----	21	28.74	SW.-----	SW, 9.-----	NW.-----	SW, 9.-----	SW-NW.
Ponce, Am. S. S.-----	New York.-----	San Juan.-----	27 30 N.	66 45 W.	20	3a, 21.-----	21	29.72	E.-----	E, 9.-----	S.-----	SE, 10.-----	E-SE.
Angelina, Am. S. S.-----	do.-----	do.-----	28 55 N.	68 30 W.	20	5a, 21.-----	21	28.20	E.-----	NE, 12.-----	SW.-----	W, 12.-----	E-NE-W.
American Importer, Am. S. S.----	Belfast.-----	New York.-----	50 37 N.	37 20 W.	21	6a, 21.-----	21	29.34	SW.-----	SW, 8.-----	WNW.-----	WNW, 10.-----	SW-WNW.
Paul H. Harwood, Am. S. S.----	New York.-----	Aruba.-----	26 38 N.	69 58 W.	20	7a, 21.-----	21	28.54	N.E.-----	NW, 9.-----	W.-----	N, 10.-----	NE-N-NW.
Champlain, Fr. S. S.-----	do.-----	Havre.-----	50 24 N.	26 06 W.	21	3p, 21.-----	21	29.44	W.-----	W, 8.-----	W.-----	W, 8.-----	SW-W.
Lord Kelvin, Br. S. S.----	Out from Falmouth.		50 15 N.	21 00 W.	21	6p, 21.-----	23	29.54	SSW.-----	SW, 8.-----	NW.-----	SSW, 9.-----	SSW-WSW.
A. C. Bedford, Am. S. S.----	Montreal.-----	Cartagena.-----	28 26 N.	66 24 W.	21	6p, 21.-----	22	29.68	ESE.-----	SE, 10.-----	SSW.-----	SE, 10.-----	ESE-SE-S.
Scanpenn, Am. S. S.-----	Copenhagen.-----	New York.-----	57 32 N.	24 50 W.	21	Mdt., 21.-----	22	28.78	SE.-----	SE, 3.-----	NW.-----	NNW, 11.-----	S-SE-NE.
Noreg, Nor. M. S.-----	Houston.-----	Gibraltar.-----	27 20 N.	71 40 W.	20	Mdt., 21.-----	23	29.36	ENE.-----	WNW, 10.-----	WSW.-----	W, 11.-----	NW-W.
York City, Br. S. S.-----	Poti.-----	Baltimore.-----	36 30 N.	59 30 W.	23	5a, 24.-----	24	28.71	S.-----	S, 12.-----	W.-----	S, 12.-----	SSE-S-NW.
Blankholm, Swed. M. S.----	Gothenburg.-----	New York.-----	45 25 N.	58 10 W.	24	11p, 24.-----	25	28.86	ENE.-----	NE, 8.-----	W.-----	W, 8.-----	ENE-NW-N.
Waukegan, Am. S. S.-----	Havre.-----	do.-----	49 59 N.	12 00 W.	26	2p, 26.-----	27	29.85	WSW.-----	WNW, 8.-----	WNW.-----	WSW, 8.-----	SW-WNW.
Hakonesan Maru, Jan. M. S.----	Cristobal.-----	do.-----	22 55 N.	74 30 W.	31	8p, 31.-----	Sept. 1	29.67	SW.-----	S, 10.-----	SE.-----	S, 10.-----	SW-S.

¹ Position approximate.

² Barometer uncorrected.

OCEAN GALES AND STORMS, AUGUST 1935—Continued

Vessel	Voyage		Position at time of lowest barometer		Gale began August—	Time of lowest barometer August—	Gale ended August—	Lowest barometer	Direction of wind when gale began	Direction and force of wind at time of lowest barometer	Direction of wind when gale ended	Direction and highest force of wind	Shifts of wind near time of lowest barometer
	From—	To—	Latitude	Longitude									
NORTH PACIFIC OCEAN													
Madoera, Du. M. S.	Manila	Los Angeles	35 06 N.	153 48 E.	5	10a. 4	6	29.70	ESE	SE, 4	ESE	SE, 8	None.
Steel Voyager, Am. S. S.	Los Angeles	Balboa	17 50 N.	103 00 W.	5	4p, 5	6	29.78	E	ESE, 7	ESE	ESE, 9	Do.
Arizonan, Am. S. S.	Balboa	Los Angeles	20 33 N.	106 53 W.	5	5p, 6	7	29.79	ESE	SE, 8	ENE	SE, 9	Do.
Athelsultan, Br. M. S.	San Francisco	Yokohama	36 09 N.	171 00 W.	6	Mdt., 6	6	29.80	SSE	S, 5	S	S, 8	SSE-SSW.
U. S. Grant, U. S. A. T.	do	Balboa	20 51 N.	108 03 W.	6	2p, 7	8	29.70	ESE	ESE, 8	SSE	ESE, 8	None.
William A. McKenney, Am. S. S.	Los Angeles	do	21 14 N.	107 46 W.	7	4p, 7	8	29.70	SSE	SE, 8	SSE	SE, 9	Do.
San Rafael, Am. S. S.	do	do	22 20 N.	109 09 W.	7	4a, 8	9	29.61	E	SE, 7	S	SE, 8	E-SE.
Ogura Maru, Jap. M. S.	Estero Bay	Yokohama	35 58 N.	167 52 W.	8	11a, 8	8	29.94	S	S, 10	S	S, 10	None.
St. Mihiel, U. S. A. T.	Balboa	Honolulu	15 47 N.	109 43 W.	8	4p, 8	9	29.72	S	SSW, 8	S	SSW, 9	None.
Steel Mariner, Am. S. S.	Los Angeles	Balboa	24 42 N.	112 30 W.	9	4a, 9	9	29.62	E	E, 8	ESE	ESE, 8	None.
Athelsultan, Br. M. S.	San Francisco	Yokohama	35 52 N.	166 12 E.	12	4p, 12	12	29.37	SSW	SW, 9	W	SW, 9	S-SW-W.
Golden Horn, Am. S. S.	do	do	46 42 N.	174 39 E.	15	10a, 15	15	29.58	WSW	W, 6	W	W, 8	SW-W.
Forbes Hauptman, Am. S. S.	Los Angeles	Balboa	17 02 N.	101 32 W.	18	5p, 18	20	29.56	SW	WNW, 3	NW	SSW, 10	NW-SSW.
Steel Traveler, Am. S. S.	Balboa	Honolulu	11 36 N.	94 58 W.	17	4p, 19	20	29.79	SW	SW, 7	SSW	SW, 9	SW-W.
Steel Trader, Am. S. S.	San Diego	Balboa	14 42 N.	96 06 W.	19	4a, 20	20	29.76	WSW	W, 7	W	WSW, 8	WSW-W.
San Jose, Fr. S. S.	Los Angeles	do	17 48 N.	103 21 W.	20	6p, 20	21	29.63	ENE	ENE, 7	ESE	SW, 9	N-ENE-SW.
Harry Luckenbach, Am. S. S.	Balboa	Los Angeles	20 44 N.	107 23 W.	20	3p, 21	21	29.30	SE	NE, 10	NE	E, 11	N-NE-E.
Edgar F. Luckenbach, Am. S. S.	Los Angeles	Balboa	18 34 N.	104 28 W.	21	4a, 21	21	29.39	NE	ESE, 6	S	SSE, 9	NE-ESE-S.
Montanan, Am. S. S.	do	do	20 39 N.	107 18 W.	21	3p, 21	22	29.42	ENE	E, 10	SE	SE, 11	N-E-SSE.
Virginia, Am. S. S.	do	do	20 30 N.	107 24 W.	21	5p, 21	22	29.12	NW	ESE, 11	ESE	ESE, 11	NW-F-S.
Hakonesan Maru, Jap. M. S.	do	do	19 40 N.	106 00 W.	21	9a, 21	22	29.29	N	SE, 11	SE	SE, 11	N-SE-S.
West Cactus, Am. S. S.	do	do	23 52 N.	112 31 W.	23	3p, 23	23	29.32	NNE	NNW, 11	WSW	NW, 11	NNE-NW.
City of San Diego, Am. M. S.	Fishing grounds out from San Diego.	do	24 38 N.	111 55 W.	22	4p, 23	24	29.59	ENE	ESE, 9	S	SSE, 11	E-ESE-S.
Pres. Grant, Am. S. S.	Seattle	Yokohama	51 24 N.	170 36 W.	21	1a, 22	24	29.49	SW	S, 8	W	W, 8	SW-S-WSW.
Athelsultan, Br. M. S.	Yokohama	San Francisco	42 35 N.	167 00 W.	30	2a, 31	30	29.59	S	S, 7	S	S, 8	S-SW.

¹ Position approximate.

² Barometer uncorrected.

NORTH PACIFIC OCEAN, AUGUST 1935

By WILLIS E. HURD

Atmospheric pressure.—Practically normal barometric conditions prevailed over the North Pacific Ocean during August 1935. The greatest monthly departures from normal occurred in the western Aleutian region, +.08 inch, and at Midway Island, −.08 inch. The greater part of the eastern half of the ocean, except to the southward of the Hawaiian Islands in midocean, and south of Cape Mendocino, along the North American coast, was dominated by anticyclonic conditions. Low pressure prevailed over the Far East. The Aleutian low, shallow as in the preceding month, lay over the Bering Sea.

TABLE 1.—Averages, departures, and extremes of atmospheric pressure at sea level, North Pacific Ocean, August 1935, at selected stations

Stations	Average pressure	Departure from normal	Highest	Date	Lowest	Date
	Inches	Inch	Inches		Inches	
Point Barrow	29.97	+0.08	30.36	12	29.48	2
Dutch Harbor	29.93	+0.07	30.58	2	29.30	24
St. Paul	29.86	+0.08	30.60	12	29.26	23
Kodiak	29.95	+0.09	30.34	12	29.64	23
Juneau	30.00	−.02	30.35	26	29.49	5
Tatoosh Island	30.06	+0.06	30.34	11	29.81	17
San Francisco	29.89	−.03	30.01	7	29.75	19
Mazatlan	29.83	−.01	29.92	12, 13	29.58	21
Honolulu	30.01	.00	30.08	4	29.91	10
Midway Island	30.00	−.08	30.14	20	29.72	6
Guam	29.80	−.02	29.90	8, 9	29.60	21
Manila	29.77	+0.03	29.88	10	29.62	4
Hong Kong	29.64		29.86	19	29.29	6
Naha	29.71	+0.02	29.92	18	29.44	26
Chichishima	29.82	+0.06	29.98	30	29.58	7
Nemuro	29.82		30.14	15	29.22	29

NOTE.—Data based on 1 daily observation only, except those for Juneau, Tatoosh Island, San Francisco, and Honolulu, which are based on 2 observations. Departures are computed from best available normals related to time of observation.

Cyclones and gales.—Outside of the Tropics, although there was some cyclonic activity in middle and higher latitudes to the westward of longitude 160° W., few gales

resulted. These occurred on scattered dates and in scattered positions and, except in two instances, did not exceed force 8. The two heavier gales were reported as follows: Of force 10 from the south on the 8th, near 36° N., 168° W., and of force 9 from the southwest on the 12th, near 36° N., 167° E. A moderately deep cyclone moved eastward at some distance south of the Aleutians, 29th to 31st, but was attended only by widely separated moderate to fresh gales. Along the coast of the United States a fresh northerly gale was experienced on the 14th northwest of San Francisco.

Typhoons.—Subjoined is a report on the typhoons of the Far East for August 1935 prepared by the Rev. Bernard F. Doucette, S. J., of the Philippine Weather Bureau. The only additional comment worthy of place here pertains to the typhoon of July 31–August 12 which struck southwestern Japan on the 11th. A press report of that date from Tokyo said that central Japan was ravaged by the storm and attendant floods which left some 200,000 persons homeless and damaged property to the extent of more than a million dollars.

Cyclones off the west coast of Mexico.—Two cyclones developed in Mexican west coast waters during the month. The earlier first appeared on the 5th near 18° N., 103° W. It followed a general west-northwesterly course and was lost to observation on the 9th, near 25° N., 113° W. The highest wind reported in connection with it was of force 9, near 18° N., 103° W., on the 5th, and near 21° N., 107–108° W., on the 6th and 7th. The lowest barometer reported was 29.61, read on the American steamship *San Rafael* near 22° N., 109° W., on the 8th.

The later cyclone originated to the southward of the Gulf of Tehuantepec on the 17th. From the 18th to 20th, scattered westerly to southwesterly gales, varying in force from 7 to 10, occurred with little reference to storm progression between the locality of origin and a position to the westward of Acapulco, thus indicating early lack of organization of the storm. On the 20th,